Additional file 1

Table S1 – Field studies investigating the effects of environmental noise exposure on the cognitive functioning of primary schoolchildren.

Study	Location[*)]	Design[†)]	Schools (n)	Children		Exposure		Cognition	
				N	Age (yr)	Source[‡)]	Noise indicator[$)]	Ability tested[#)]	Test used[**)]
Bronzaft [8]	NY, US	FU	1	955	7-11	T	Quiet vs. Noisy	1	CAT
Green [9]	NY, US	Ec	362	8240	7-11	A		1	National Standardized Tests of Reading ability
LAS [10-12]	LA, US	CS, FU	7	262	8-9	A	Peak level	1, 2 3,4 5	CTBS Cross-out letters in ambient or distracting condition WAD
Sanz [13]	Valencia, Sp	CS	2	136	6-11	R	Mean equivalent levels	4	Faces test and crossing-out 2 letters from a text
MAS [14-16]	Munich, Ger	BA	-	326	9-10	A	$L_{Aeq, 24hr}$	1 6 7, 8	Standardized German Reading test Recall of a test Backward recall of consonants

								4 9	Visual search task and Reaction time test
SEHSa [17]	London, UK	CS	8	340	8-11	A	$L_{Aeq, 16hr}$	10 6 8	SRS Recognition and recall Serial-digit recall task
SEHSb [18]	London, UK	FU	8	275	8-11	A	$L_{Aeq, 16hr}$	10 11	SRS TEA-Ch, scoring activity
WLSS [19]	London, UK	CS	20	451	8-9	A	$L_{Aeq, 16hr}$	10 12, 13, 14 7 11	SRS-2 CMS, story C & D Backward digit recall TEA-Ch, Score activity
SATS [20]	London, UK	Ec	123	11,000	11	A	$L_{Aeq, 16hr}$	2, 15 and 16	SATs, Key Stage 2 tests
TMS [21]	Inn Valley, Au	CS	26	1230	8-11	T, R	L_{dn}	17, 18 4	LMT Visual search task
Okinawa [22]	Okinawa,	CS	11	2269	8-11	MA	L_{dn}	6, 8	Auditory and visual short-term

	Jp								memory tests
Shield [23]	London, UK	Ec	142		7 and 11	E, I	L_{Aeq}, L_{A90} and L_{Amax}	1, 2, 15, 19 and 20	SATs, Key Stage 1 tests SATs, Key Stage 2 tests

*) NY = New York, US = United States, LA = Los Angeles, Sp = Spain, Ger = Germany UK = United Kingdom, Au = Austria, Jp = Japan; †) CS = cross sectional study, FU = Follow/up study, Ec = Ecologic study, BA = Before-after study; ‡) T = Train, A = Aircraft, R = Road traffic, MA = Military Aircraft, E = External noise, I = Internal noise; $) $L_{Aeq, 24hr}$ = The equivalent continuous sound level over 24 hours, $L_{Aeq, 16hr}$ = The equivalent continuous sound level over 16 hours, L_{dn} = Day-night sound level, the average noise level over a 24 hour period, L_{Aeq} = Equivalent sound pressure level in dB(A), L_{90} = The sound level exceeded for 90% of the time, used to describe the background noise level, L_{Amax} = the maximum level of sound, i.e. the peak level of sound measured in any given period; #) Cognitive ability tested: 1 = Reading, 2 = Mathematics, 3 = Incidental Memory, 4 = Attention, 5 = Auditory Discrimination, 6 = Long-term Memory, 7 = Working memory, 8 = Short-term memory, 9 = Speech perception, 10 = Reading comprehension, 11 = Sustained Attention, 12 = Memory, immediate recall, 13 = Memory, delayed recall, 14 = Memory, delayed recognition, 15 = Science, 16 = English, 17 = Intentional Memory, 18 = Incidental memory, 19 = Writing, 20 = Spelling; **) CAT = California Achievement Test, CTBS = California Test of Basic Skills, WAD = Wepman Auditory Discrimination Test, Faces test = Difference Perception Test, SRS = Suffolk Reading Scale, TEA-Ch = Tests of Everyday Attention for Children, CMS = Child Memory Scale, SAT = Standard Assessment Task, LMT = Lern und Merkfähigkeitstests